

## Eleventh update of the 2009 Helicopter Monitoring Program

### Floatables:

The New York/New Jersey Harbor Complex was monitored for floatables six times from August 1 - 7. The Harbor was clear of significant floatables on August 1, 4, 5, 6 and 7.

On August 3, a slick, approximately 90 yards long by 10 yards wide, was reported in the Arthur Kill.

The floatable debris consisted of large wood, paper and plastics and was reported to Army Corps of Engineers. The Army Corps of Engineers conducted clean-ups as necessary.

### Sampling:

Phytoplankton samples were collected along the New Jersey coast, in Raritan Bay, Sandy Hook Bay, Barnegat Bay, Great Bay, Great Egg Harbor and Delaware Bay, on August 5. Samples were given to the New Jersey Department of Environmental Protection (NJDEP), Bureau of Marine Water Monitoring Leeds Point Laboratory for analysis. These samples help fulfill NJDEP's commitments to the National Shellfish Sanitation Program. Results, as reported by NJDEP are as follows:

The waters of Barnegat Bay from Toms River to Barnegat Inlet are experiencing a non-toxic bloom of *Nannochloris oculata*.

The organism *Gyrodinium cf aureolum*, which is associated with mild skin irritation in bathers, was detected off the coast of Long Branch.

The Bureau has implemented an aircraft remote sensing program for estimating chlorophyll levels in NJ's coastal waters. This program provides a valuable perspective on algal conditions and trends. To view these maps please visit the website. <http://www.nj.gov/dep/bmw/remotesensing.htm>

No samples collected in the New Jersey Coastal Waters were found to contain the Paralytic Shellfish Poisoning species *Alexandrium spp*.

### **See pages 2-4 for a complete report.**

Bottom water samples were collected for dissolved oxygen (DO) analysis at stations one and nine miles off the coast of New Jersey at the following stations: Sandy Hook (NYB20), Long Branch (JC14), Belmar (JC27), Bay Head (JC41), Seaside Heights (JC53), Barnegat (JC61), Beach Haven (JC69), Atlantic City (JC75), Strathmere (JC85) and Hereford (JC90), on August 6. Station NYB20 and stations ending with an "E" are approximately one nautical mile off the coast, and station NYB21 and stations ending with a "G" are approximately three nautical miles off the coast.

The lowest dissolved oxygen value, 2.25 mg/l, occurred one nautical mile off Long Branch. Three other values were below 3 mg/l: 2.4 mg/l occurring one nautical mile off Belmar, 2.45 mg/l occurring one nautical mile off Bay Head, and 2.95 mg/l occurring three miles off Beach Haven.

Dissolved oxygen values below 3 mg/l are considered lethal if prolonged.

### **See page 5 for results, analyzed and reported by NJDEP.**

NJDEP Water Monitoring and Standards  
Bureau of Marine Water Monitoring  
Algal Conditions in New Jersey Estuarine and Coastal Waters  
Week of August 3, 2009

TO: Distribution

FROM: Bill Heddendorf, Senior Environmental Specialist  
Bureau of Marine Water Monitoring

DATE: August 6, 2009

SUBJECT: Report of Algal Conditions in New Jersey Coastal Waters  
Week of August 3, 2009

Samples were collected by the USEPA helicopter and analyzed at the NJDEP Bureau of Marine Water Monitoring's Leeds Point Laboratory.

**Raritan/Sandy Hook Bay Area**

The waters of Raritan Bay are experiencing low concentration of mixed diatoms. No toxic species were detected.

The waters of Sandy Hook Bay were experiencing a mild bloom of mixed diatoms (4880 cells/mL). No toxic species were detected.

**New Jersey Coastal Area**

The ocean waters from Long Branch to Manasquan are experiencing low concentrations of mixed dinoflagellates. Cell counts ranged from 2720 to 1480 cells/mL. The organism *Gyrodinium cf aureolum*, which is associated with mild skin irritation in bathers, was detected off the coast of Long Branch. The ocean waters from Ship Bottom to Cape May are generally clear with sparse algal concentrations. No toxic species were detected.

**Barnegat Bay Area**

The waters of Barnegat Bay from Toms River to Barnegat Inlet are experiencing a bloom of *Nannochloris oculata*. The waters from Manahawkin Bay are generally clear with sparse algal concentrations. The waters of Little Egg Harbor are experiencing low concentrations of a diverse assemblage of phytoplankton. No toxic species detected were detected.

**Great Bay**

The waters of Great Bay are generally clear with sparse algal concentrations. No toxic species were detected.

**Great Egg Harbor**

The waters of Great Egg Harbor are generally clear with sparse algal concentrations. No toxic species were detected.

**Delaware Bay/Capeshore Area**

The waters along the Cape Shore near Dias Creek and at the mouth of the bay are experiencing low concentrations of a diverse assemblage of phytoplankton with a significant amount of detritus. No toxic species were detected.

**\*No samples collected in the New Jersey Coastal Waters were found to contain the Paralytic Shellfish Poisoning species *Alexandrium spp.***

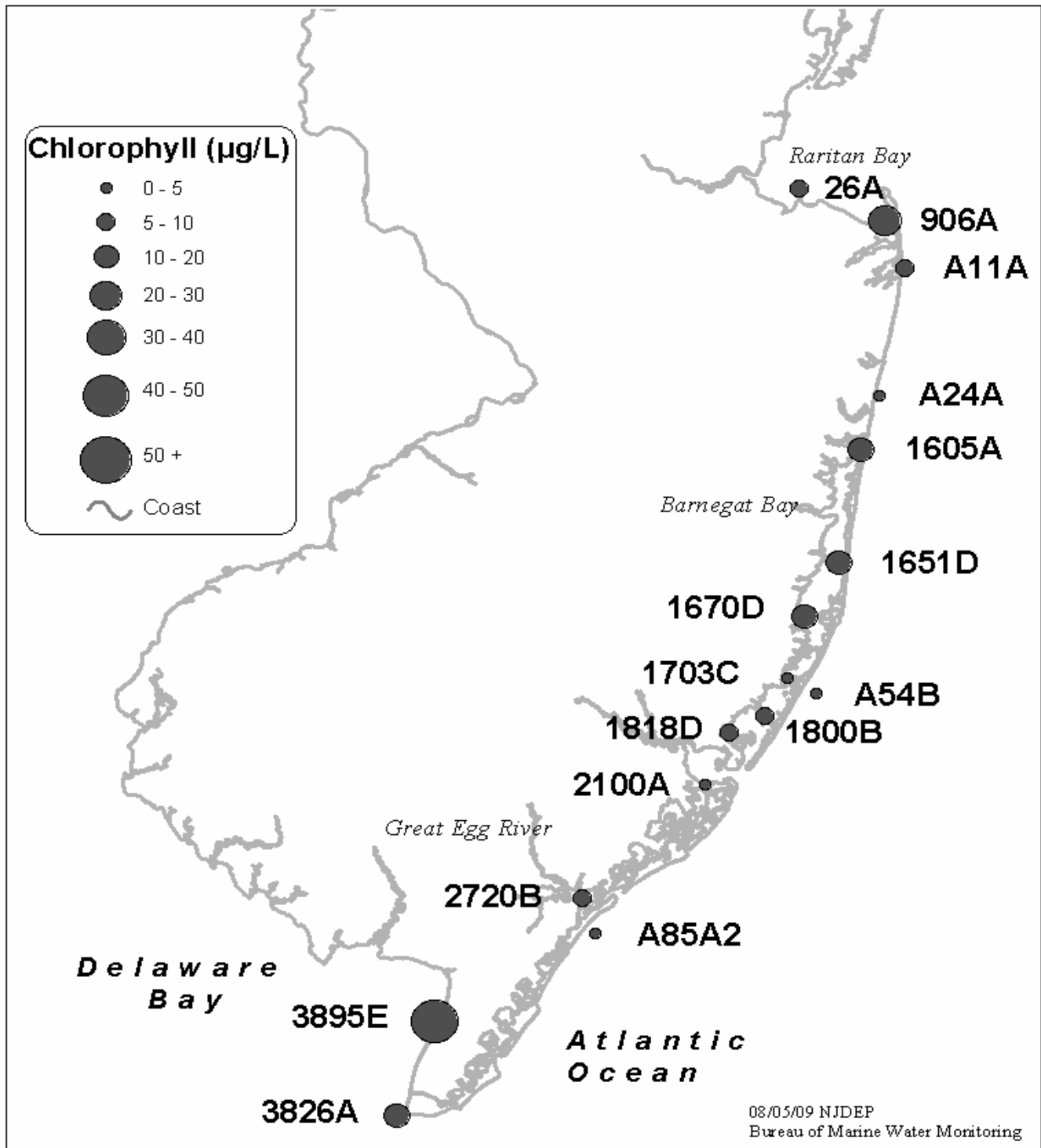
**NJDEP Water Monitoring and Standards  
Bureau of Marine Water Monitoring  
Phytoplankton Data Sheet**

**Date: 08/05/2009**

**Collector: EPA**

Station #	Time	Water Temp.	Chlorophyll (ug/l)	Dominant Species	Toxic Species*
26A	1125	25.6	5.89	Mixed diatoms	None present
906A	1133	24.6	27.75	Mixed diatoms Total diatom count (4880 cells/mL)	None present
A11A	1137	23.0	6.31	<i>Gyrodinium sp.</i> (2720 cells/mL)	None present
A24A	1148	22.9	4.20	Mixed dinoflagellates	None present
1605A	1153	26.2	15.14	<i>Nannochloris oculata</i>	None present
1651D	1220	27.0	15.56	<i>Nannochloris oculata</i>	None present
1670D	1225	26.2	15.56	<i>Nannochloris oculata</i>	None present
1703C	1232	27.3	3.36	Sparse algal concentrations	None present
A54B	1235	22.8	2.10	Sparse algal concentrations	None present
1800B	1240	26.2	7.57	Mixed diatoms	None present
1818D	1244	26.3	6.73	Mixed diatoms	None present
2100A	1250	25.9	2.94	Sparse algal concentrations	None present
2720B	1305	26.4	5.05	Sparse algal concentrations Significant amount of detritus	None present
A85A2	1308	21.5	2.52	Sparse algal concentrations	None present
3826A	1333	24.4	16.40	Diverse assemblage of phytoplankton Significant amount of detritus	None present
3895E	1341	26.8	41.58	Diverse assemblage of phytoplankton Significant amount of detritus	None present

- **Toxic Species = toxic species associated with shellfish safety including; *Prorocentrum lima.*, *Alexandrium spp.*, *Dinophysis spp.*, and *Pseudonitzschia spp.***
- **The Bureau has implemented an aircraft remote sensing program for estimating chlorophyll levels in NJ's coastal waters. This program provides a valuable perspective on algal conditions and trends. To view these maps please visit the website. <http://www.nj.gov/dep/bmw/remotesensing.htm>**



**date:** 8/6/2009

Station	Time	Temp	Surf T	DO	dup	trip
NYB20	1033	16.3		3.80		
JC14E	1045	16.2		2.25		
JC27E	1055	15.8		2.40		
JC41E	1110	14.4		2.45		
JC53E	1120	15.3		3.10		
JC61E	1200	19.2		6.60		
JC69E	1216	18.1		3.70		
JC75E	1229	18.6		4.30		
JC85E	1241	16.4		4.10		
JC90E	1255	16.9		5.50		
NYB21	1029	14.8		3.95		
JC14G	1040	14.7		3.40		
JC27G	1050	14.6		3.30		
JC41G	1105	14.1		3.70		
JC53G	1117	14.6		4.10		
JC61G	1156	15.5		3.10		
JC69G	1211	15.3		2.95		
JC75G	1227	16.8		3.40		
JC85G	1238	16.1		5.30		
JC90G	1250	16.5		4.50		